

DOCKET NO: 280271US0X PCT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

IN RE APPLICATION OF: :  
HIROSHI MIURA, ET AL. : EXAMINER: PALENIK, JEFFREY T.  
SERIAL NO.: 10/554,921 :  
FILED: OCTOBER 31, 2005 : GROUP ART UNIT: 1615  
FOR: COMPOSITION CONTAINING :  
MEDICINE EXTREMELY SLIGHTLY :  
SOLUBLE IN WATER BEING :  
EXCELLENT IN ELUTING PROPERTY :  
AND METHOD FOR PREPARATION :  
THEREOF

DECLARATION UNDER 37 C.F.R. §1.132

COMMISSIONER FOR PATENTS  
ALEXANDRIA, VIRGINIA 22313

SIR:

I, Toshio INAGI, hereby declare:

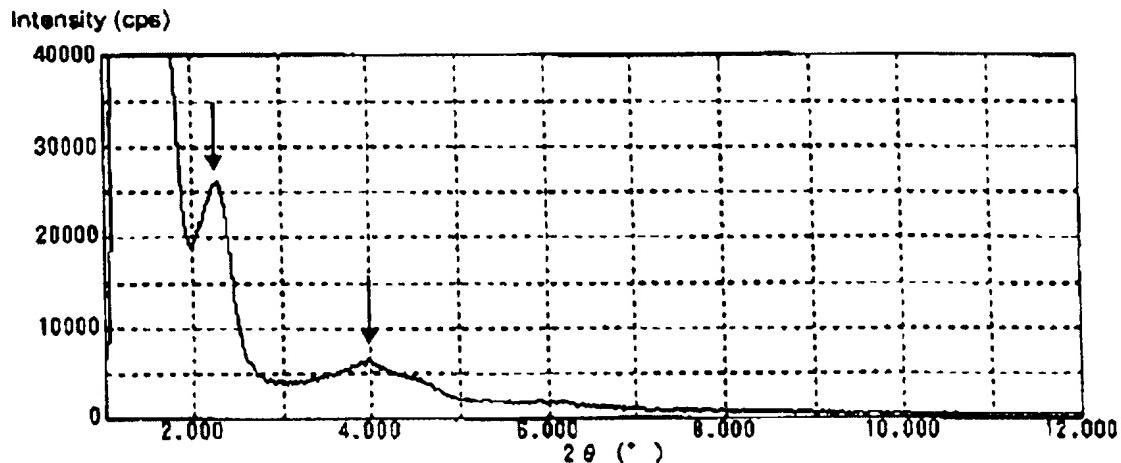
1. I am a named inventor in the above-captioned patent application.
2. I am a graduate of the University of Tokyo. I received a PhD in the field of Pharmaceutical Sciences in 1983.
3. I have been employed by Kowa Co., Ltd. ("Kowa"), the assignee of the above-captioned patent application, for 37 years. I have been employed at Kowa as a director of preparation and research relating to mechanisms of percutaneous absorption.
4. I am familiar with and have worked with the products and methods described in the above-captioned patent application.

5. I am familiar with U.S. Patent Application Publication No. US 2002/0047058 to Verhoff et al. ("Verhoff") and U.S. Patent No. 6,753,330 to Takano et al. ("Takano"), which I understand have been cited against the above-captioned patent application.

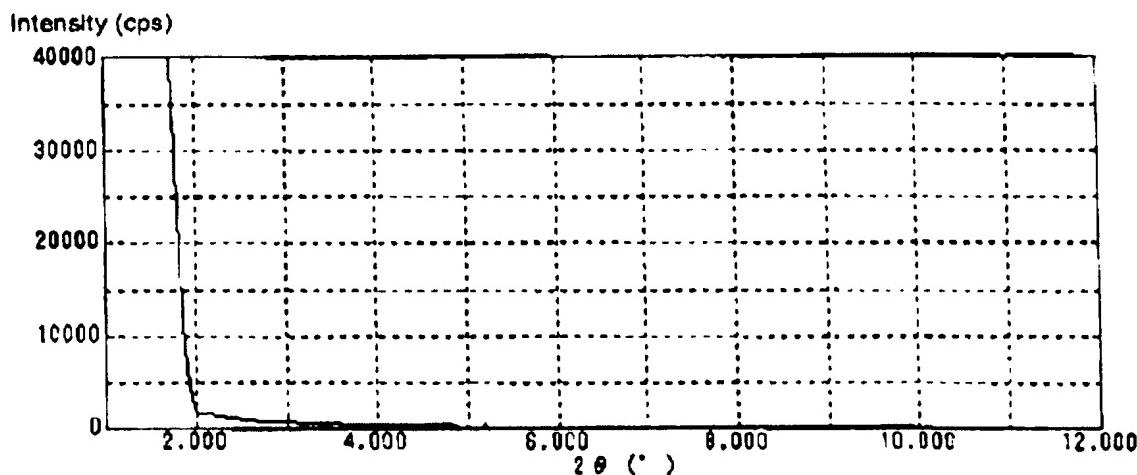
6. I and/or those under my direct supervision and control carried out the following experimentation.

Samples were obtained of the porous silica material employed in Example 1 of the above-captioned patent application and the silica material employed in Example 1 of Verhoff (Nyacol 9950/Bindzil 9950). Powder X-ray diffraction patterns of the respective samples were obtained using a powder X-ray diffractometer (model: RINT2000, Rigaku Corporation) with Cu-K $\alpha$  radiation (40 kV, 20 mA). The diffraction patterns are shown below.

**Powder X-ray diffraction pattern of the porous silica material of Example 1 of the specification (FSM-C16)**



**Powder X-ray diffraction pattern of Nyacol 9950 (current product name: Bindzil 9950), the silica material of Example 1 of Verhoff**



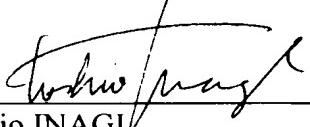
7. I understand that, e.g., claim 21 of the above-captioned patent application requires a porous silica material having an X-ray diffraction pattern including at least one peak at a position of diffraction angle ( $2\theta$ ) corresponding to a  $d$  value of at least 1 nm. As is evident from the X-ray diffraction patterns shown above, Nyacol 9950/Bindzil 9950, as employed in Verhoff, does not have the X-ray diffraction pattern required in claim 21, while the porous silica material employed in Example 1 of the above-captioned patent application has the X-ray diffraction pattern required in claim 21.

8. The Examples of the above-captioned patent application demonstrate that compositions, such as recited in claim 21, provide superior dissolution properties relative to known compositions, which are not produced by treating a mixture comprising an extremely poorly water-soluble drug and a porous silica material with a supercritical or subcritical carbon dioxide fluid. The improved performance exhibited by compositions according to claim 21 of the above-captioned patent application, relative to compositions disclosed or suggested by Verhoff and Takano, is significant and unexpected.

Application No. 10/554,921  
Declaration Under 37 C.F.R. §1.132

9. All statements made herein of my own knowledge are true, and all statements made on information and belief are believed to be true; these statements were made with the knowledge that willful false statements are punishable by fine and/or imprisonment under Section 1001 of Title 18 of the United States Code, and that such willful false statements may jeopardize the validity of this application or any patent issuing therefrom.

Date: June 17, 2009

  
Toshio INAGI